

**METHOD AND APPARATUS FOR REPRESENTING DATA AVAILABLE
IN A PEER-TO-PEER NETWORK USING BLOOM-FILTERS**

ABSTRACT

A method and apparatus is disclosed for representing data available in a peer-to-peer network of processing nodes. In one arrangement, respective Bloom-Filters may be formed at the nodes as a function of data available via the nodes. The Bloom-filters may be communicated between peer-to-peer coupled nodes of the peer-to-peer network that have formed connections using incentive-based criteria to control whether one node connects to another node. A search expression may be formed for locating a data object, and nodes selected as a function of the Bloom-filters and the incentive-based criteria. The search expression may be propagated to the selected nodes, and the result of the search expression output from nodes that satisfy the search expression.